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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/807,080

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Noriyuki Fujimori

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EXAMINER

SMITH, PHILIP ROBERT

ART UNIT

PAPER NUMBER

3739

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DELIVERY MODE

04/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/807,080	Applicant(s) FUJIMORI ET AL.	
	Examiner PHILIP R. SMITH	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/9/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

[01] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

[02] Claims 1-2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi (2003/0023150) in view of Yoon (6,419,626) and in further view of Ichikawa (5,912,794).

[03] With regard to claim 1:

[03a] Yokoi discloses a capsule endoscope ("capsule-type endoscope 101F" [0266]) comprising:

- a swallowable capsule housing ("capsule body 102A" [0266]) configured to be swallowed by a patient;
- an image pickup unit ("image pickup device 107a" [0230]), a wireless communication unit ("antenna 113a" [0267]), a lighting unit ("LED 108a" [0270]) and a signal processing unit ("driving and processing circuit 111a" [0253]), each of which being disposed in the swallowable capsule housing (see Figure 29);
- an internal circuit comprising one or more of the image pick-up unit, the signal processing unit, the wireless communication unit, respectively;

[03b] Yokoi does not disclose

- a temperature detection means disposed in the swallowable capsule housing and arranged in at least one of internal electric circuits and which detects an internal temperature of the corresponding internal electric circuit, converts information indicating the detected temperature into an electric signal in a predetermined format, and generates the electric signal;

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- temperature determination means disposed in the swallowable capsule housing for performing a predetermined determination on the basis of the electric signal generated from the temperature detection means; and
- power control means disposed in the swallowable capsule housing for controlling power supply to the corresponding internal electric circuit on the basis of the determination result obtained by the temperature determination means.

[03c] Yoon discloses

- a temperature detection means ("temperature sensing thermistor" 3/8-24) arranged in at least one of internal electric circuits ("a single semiconductor substrate or chip has a CMOS imaging sensor and a temperature sensing thermistor") which detects an internal temperature of the corresponding internal electric circuit, converts information indicating the detected temperature into an electric signal in a predetermined format, and generates the electric signal ("a microprocessor and the associated signal processing circuitry for generating image signals and temperature measurement signals for transmission to a display and/or a data logging computer").
- At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide a temperature detection means arranged on the "image pickup device 107a" disclosed by Yokoi. A skilled artisan would be motivated to do so in order to "include a second physical parameter sensor".

[03d] Yokoi in view of Yoon does not disclose

- temperature determination means disposed in the swallowable capsule housing for performing a predetermined determination on the basis of the electric signal generated from the temperature detection means; and
- power control means disposed in the swallowable capsule housing for controlling power supply to the corresponding internal electric circuit on the basis of the determination result obtained by the temperature determination means.

[03e] Ichikawa discloses an “abnormality detection and protection circuit for a semiconductor device” (title). The device includes:

- temperature determination means (“excessive increase in the temperature of the semiconductor device 1” 5/1-4) for performing a predetermined determination on the basis of an electric signal generated from a temperature detection means (“thermistor 23 attached to the chip of the semiconductor device 1” 4/65-67); and
- power control means (“operation stopping means 50” 5/48) for controlling power supply (“ground the output of the driving circuit 10” 5/48-57) to the corresponding internal electric circuit on the basis of the determination result obtained by the temperature determination means.

[03f] At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a power control means such to control a power supply on the basis of temperature detection as disclosed by Ichikawa. Yokoi in view of Yoon discloses a capsule endoscope having a semiconductor chip comprising an image pickup unit and a temperature detection means. Ichikawa discloses that an operation stopping means may be used to shut down the chip. A skilled artisan would be motivated to include an

operation stopping means in the invention of Yokoi in view of Yoon in order to prevent abnormal operation of a semiconductor device.

- [04] With regard to claim 2: the “operation stopping means 50” disclosed by Ishikawa interrupts the power supply (“ground the output of the driving circuit” as noted above) when the temperature determination means determines that the internal temperature is higher than a predetermined value (“excessive” as noted above).
- [05] With regard to claim 4: Yoon discloses that the temperature detection means temperature detection means (“temperature sensing thermistor” 3/8-24) comprises a member which is independent of the internal electric circuits (i.e. the “CMOS imaging sensor”) and is arranged in a power supply line (which supplies power to the whole chip) constituting a part of the internal electric circuits.
- [06] With regard to claim 6: as noted above, Yoon and Ishikawa disclose that the temperature detection means includes a thermistor.

Additional Claim Rejections - 35 USC § 103

- [07] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- [08] Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi (2003/0023150) in view of Yoon (6,419,626) and in further view of Ichikawa (5,912,794) and in further view of Tamaoki (4,757,347).
- [09] As noted above, Yoon and Ishikawa disclose a thermistor.
- [10] Yokoi in view of Yoon and Ishikawa does not disclose that this is particularly a thermal fuse or thermistor.
- [11] Tamaoki discloses “[a] temperature detector 20 with a built-in thermistor and a thermal fuse.”

- [12] At the time of the invention, it would have been obvious to a person of ordinary skill in the art that, the “temperature detecting means” disclosed by Niida take the form of a thermistor or thermal fuse. A skilled artisan would be motivated to do so because these are conventional forms of temperature detecting means. In reduction to practice, it is obvious to use well-known elements.

Response to Arguments

- [13] Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

- [14] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
- [15] A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
- [16] Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILIP R. SMITH whose telephone number is (571)272-6087 and whose email address is philip.smith@uspto.gov. The examiner can normally be reached between 9:00am and 5:00pm.
- [17] If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272 4764.

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[18] Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip R Smith/

Examiner, Art Unit 3739

/Linda C Dvorak/

Supervisory Patent Examiner, Art Unit 3739